REMARKS

This Amendment, filed in reply to the Office Action dated October 31, 2007, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

I. Summary of Final Office Action

Claim 2 stands rejected under 35 U.S.C. § 112 as the previous Amendment does not properly show the claim amendment stated in the Remarks section.

Claims 1-3 and 10 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Bichot et al. (US Pub. 2004/0001468: hereinafter "Bichot").

Claim 4 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Bichot further in view of Chuah (US Pub. US 2003/0076803; hereinafter "Chuah").

Claim 5 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Bichot further in view of Soderbacka et al. (US Pub. US 2003/0114158; hereinafter "Soderbacka").

Claims 6 and 7 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Chuah further in view of Bichot.

Claims 8, and 9 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Chuah further in view of Bichot as applied to claim 6, and Soderbacka.

II. Amendment Summary

In this Amendment, Applicant amends claims 1-8 and 10 to more clearly define the present application. No new matter is added. Entrance and allowance of the claims are respectfully requested.

III. Analysis of Claim Rejection - 35 USC § 112

As claims 2 and 3 are amended, Applicant respectfully requests withdrawal of this rejection.

IV. Analysis of Claim Rejection - 35 USC § 102

Claims 1 and 10

In rejecting claim 1, the Examiner still alleges that the claimed interface unit (IU) is disclosed by Fig. 1 of Bichot that shows an interworking scheme between WLAN 10 and wireless telephony network 12. Applicant, however, respectfully traverses the rejection again at least under the following analyses.

As described in the 4th paragraph of page 4 of the specification, the present application provides an improved IU enabling very tight coupling of 3GPP/UMTS and WLAN systems. To implement this aspect, the interface unit (IU) or interworking unit (IWU) is configured to mimic Node B that is served by a 3GPP/UMTS network (5th paragraph of page 4). In the meantime, in order to provide a wireless terminal (WT) of a WLAN with an access to the 3GPP/UMTS, the IU needs to change a protocol for connection of the IU and an access point (AP) of the WLAN to a protocol for connection of a radio network controller (RNC) and Node B (i.e., from IU-AP protocol to RNC-Node B protocol). As the IU mimics Node B, however, a required protocol change can be obtained by converting an IU-AP protocol to an RNC-IU protocol. Specifically in the claim, the former is defined as the second (communication) protocol, and the latter as the first (communication) protocol. It should be noted, here, that the first communication protocol is defined in the claim as concerning between the IU and the radio network controller (RNC). This

architecture is provided to establish a very tight coupling as noted above.

That being said, Fig. 1 of Bichot does not disclose the third component of the claimed IU which converts the second protocol (IU-AP) to the first protocol (RNC-IU), because IWU 18 is connected to RNC 22[1] only by way of Node 21. That is, IWC 18 does not mimic Node 21, whereby the claimed protocol change (from IU-AP protocol to RNC-IU protocol) is not feasible. Here, Node 21 is an independent node that is served by wireless telephony network 12. Node 21, however, works as an intermediary disposed between IWC 18 and RNC 22 to connect WLAN 10 and wireless telephony network 12. This is the particular interworking scheme of Bichot that takes advantage of a loose coupling that employs an intermediary such as Node 21 through which a WLAN gets connected to a wireless telephony network such as the 3GPP/UMTS.

As stated above, the present application is provided for a very tight coupling of disparate networks. In implementing this very tight coupling, the claimed IU is characterized at least by the third component for converting the second protocol (IU-AP) to the first protocol (IU-RNC) under the above-explained principle. This characteristic cannot be obtained by the teachings of Bichot, because even though this reference may be alleged to suggest the second protocol, it cannot teach (or even suggest) the first protocol establishing a connection between the IU and RNC. Note again that Bichot is directed to a loose coupling that requires an intermediary such as Node 21 between IWU 18 and RNC 22.

Whether or not Applicant recites the term "a very tight coupling" in the claim does not

[1] The Examiner alleges that IWC 18 and RNC 22 correspond to the claimed IU and RNC.

restrict Applicant's arguments for patentability of the claim, since only the current claim recitation of protocol conversion clearly distinguishes the claimed IU from IWU 18 of Bichot as discussed thus far.

Thus, Bichot does not teach the claimed third component.

In the meantime, Bichot is also alleged to teach the fourth component of the IU. The Examiner simply iterates that "[w]hether the initiators get response from the network is related to load situation." Applicant respectfully disagrees.

As the IU (fourth component) provides the RNC with information of load situation of APs, the RNC is enabled to control the APs in the WLAN in the same or a similar manner for the cells of the 3GPP/UMTS that the RNC controls. In Bichot, however, such control of AP 16 by RNC 22 is not possible, because information of load situation of AP 16 cannot be provided to RNC 22 when RNC 22 is connected to IWU 18 through Node 21 which is only an intermediary to connect WLAN 10 and wireless telephony network 12. Moreover, there is no disclosure in Bichot that IWC 18 provides load situation information to RNC 22 even through Node 21.

As to this element (fourth component) of the claim, the Examiner's allegation appears to be only based on inherency while the reference is silent about the claimed characteristic. However, it is well settled in *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991) that

> To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be

so recognized by persons of ordinary skill.

Establishing a signal path between two ends does not necessarily imply that there is information exchange regarding load situation of one end. The claimed characteristic is not necessarily present in the network connection of Fig. 1 of Bichot. Thus, Bichot also does not inherently teach the fourth component of the IU.

Moreover, please note that Bichot does not disclose the additionally recited elements of the claim as amended. These elements regarding the load situation are supported at least in Fig. 5 and the first paragraph of page 12 of the specification.

At least due to the foregoing reasons, Applicant respectfully submits that claim 1 and corresponding method claim 10 would not have been anticipated by Bichot.

Claims 2 and 3

These claims should be allowable at least due to their dependencies.

IV. Analysis of Claim Rejection - 35 USC § 103

Claim 4

The Examiner rejects the claim again alleging that Chuah teaches the fifth component of the IU for balancing the load of a number of the APs within a logical cell of the WLAN. The Examiner particularly cites paragraph 30, lines 1-3 of Chuah. Applicant respectfully traverses the rejection.

Chuah appears to disclose improved load balancing in a radio access network. However, the load balancing scheme of the reference is used to distribute the load among different RNCs

and Nodebs (see paragraph 30). Neither of the RNCs and Nodebs corresponds to the APs as recited in the claim. When Chuah is combined to Bichot, load balancing will be possible only within the wireless telephony network 12 that includes RNC 22 and Node 21. There will be no effect of load balancing in WLAN 10 since Chuah does not teach load balancing within a WLAN. Thus, the alleged combination of Chuah and Bichot cannot achieve the claimed IU. That is, Chuah does not make up for the deficiency of Bichot to achieve the claimed IU.

Moreover, there is no teaching or suggestion in any of Chuah and Bichot that an interface unit or interworking unit such as the claimed IU or IWU of Bichot performs load balancing of APs in a WLAN.

Therefore, Applicant respectfully submits that claim 4 would not have been obvious in view of Bichot and Chuah. Claim 4 should also be allowable due to its dependency.

Claim 5

The Examiner rejects this claim again relying on Soderbacka. Applicant respectfully traverses the rejection.

The handover scheme shown in Fig. 1 of Soderbacka shows a handover between two heterogeneous networks, i.e., between a 3G UTRAN 1 and a 2G GSM network. By contrast, the claimed handover occurs between two APs in a logical cell of a WLAN. This handover is not between any two of a WLAN, a UMTS, 3G UTRAN[2], and 2G GSM. Moreover, the handover as recited in the claim is performed by the fifth component of the IU, which is distinguished from

[2] UMTS Terrestrial Radio Access Network

any RNC, AP or wireless terminal. In this respect, Soderbacka clarifies in paragraph 63 that the handover between the 3G UTRAN 1 and the 2G GSM is performed by the SGSN[3] which belongs to a core network. From this, even though the SGSN may correspond to the RNC as recited in claim 1, the SGSN may not correspond to the claimed IU. Thus, Soderbacka does not teach or suggest the handover between APs within a logical cell as claimed.

In addition, even though the teaching of handover in the reference is combined to Bichot, the handover between APs in Bichot will be handled by the RNC but not by the IWC 18. This is inconsistent with the claimed invention.

Therefore, the alleged combination of Soderbacka and Bichot cannot achieve the claimed IU. That is, Soderbacka does not make up for the deficiency of Bichot to achieve the claimed IU.

The Examiner also alleges that, from Fig. 1 of Soderbacka, the terminal plays the same function of the claimed IU. As to this allegation, Applicant submits that the claimed aspect of the IU is not directed to whether there is a handover control between APs by any network element, but directed to which network element performs a handover between APs. In this respect, Applicant respectfully requests reconsideration that the claim recites a handover control by the IU, not by any other element including a "terminal" as alleged by the Examiner. Further, Applicant submits that a "terminal", whether it is dual mode or not, is only a target of handover control in a radio access network, but it cannot be a network element that performs handover control over other element.

[3] Serving GPRS Support Node (GPRS: General Packet Radio Service)

Therefore, Applicant respectfully submits that claim 5 would not have been obvious over the references regardless of its patentability based on the claim dependency. Claim 5 should also be allowable due to its dependency.

Claims 6 and 7

Applicant traverses the rejection of claim 6 again because Bichot fails to disclose the claimed IU providing, *inter alia*, the load information to the RNC.

Claim 7 should be allowable at least for the similar reasons discussed for claim 4

These claims should also be allowable due to their dependencies.

Claims 8 and 9

Claim 8 should be allowable at least for the similar reasons discussed for claim 5, or its dependency.

Claim 9 should be allowable at least due to its dependency.

V. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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23373
CUSTOMER NUMBER

Date: January 31, 2008